

RESULTS AND DISCUSSION

Four color tests were performed on both the sample and reference powder with the following results:

Marquis	orange → brown
Liebermann's	orange
sodium nitroprusside	no color change
acidified cobalt thiocyanate	no color change

The mass spectrum (Fig. 3) of the methanol extract for lisdexamfetamine produced a base ion of *m/z* 83 with a molecular ion of *m/z* 163. Other major ions present include *m/z* 101, 91, 171, and 155.

FTIR-ATR data (Fig. 4) produced principle absorption bands at 1634, 1545, 1513, 1157, and 1036 cm^{-1} .

The alkaline hydrolysis of lisdexamfetamine produced a trace of amphetamine (Figs. 5 and 6).

CONCLUSION

Analytical data consisting of color tests, GC-MS and FTIR-ATR was presented to and the analyst with the identification and confirmation of lisdexamfetamine. The alkaline hydrolysis procedure has shown that amphetamine can be cleaved from the lysine group, although an appreciable amount was not produced under the stated conditions.

ACKNOWLEDGEMENTS

1. Sandra Williams, Shire, Inc. for providing the standard
2. Agent Tim McKibben, CIL, for sharing his data

REFERENCES

1. Vyvanse® "Medication Guide", Shire Pharmaceuticals Inc. retrieved from <http://www.vyvanse.com> on September 11, 2007.
2. Press release announcement retrieved from <http://www.shirepharmaceuticals.com> on March 3, 2008.

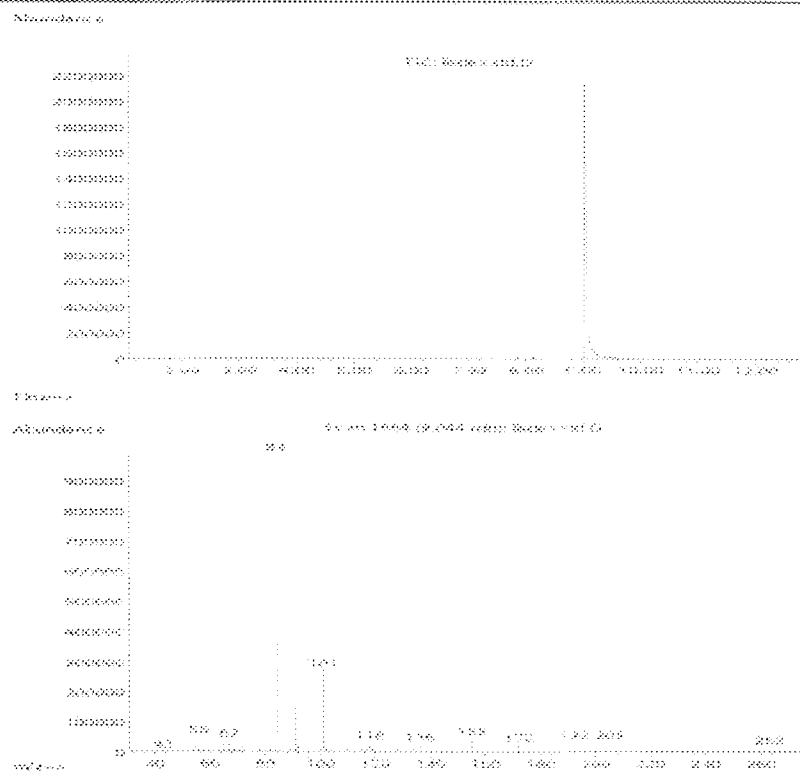


Fig. 3. TIC and mass spectrum of 10-hexameramine; MW = 263.34

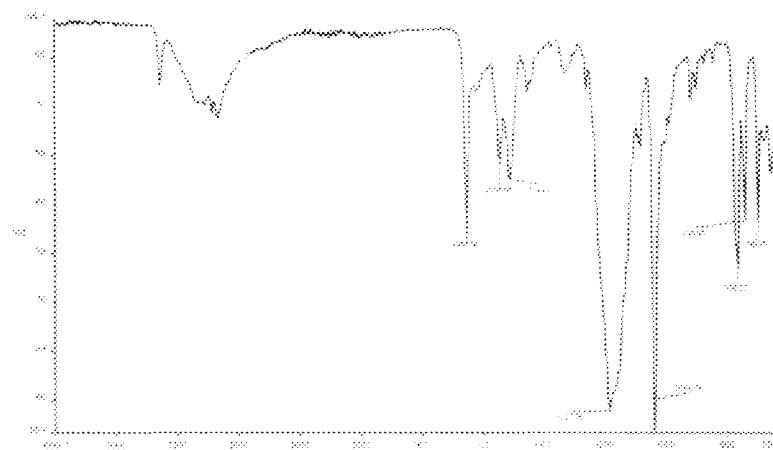


Fig. 4. FTIR-NIR of Nidexaminine dimethylane.

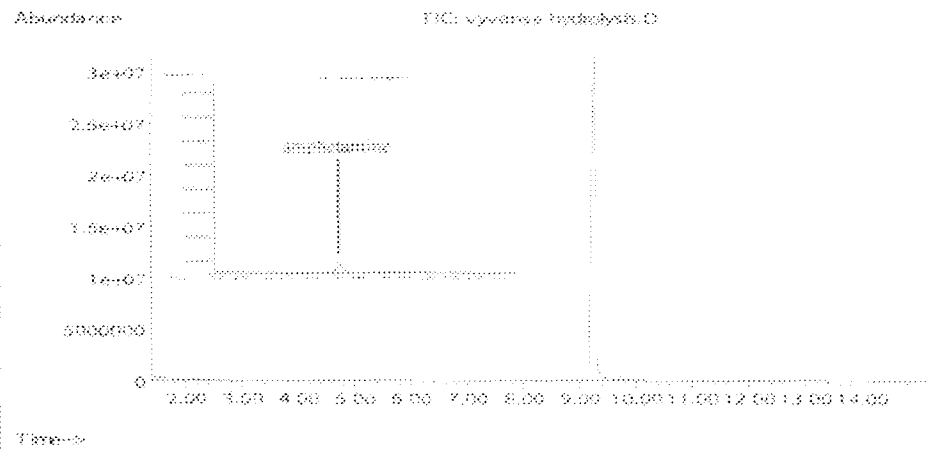


Fig. 5 TIC of amphetamine peak after alkaline hydrolysis of bupropion

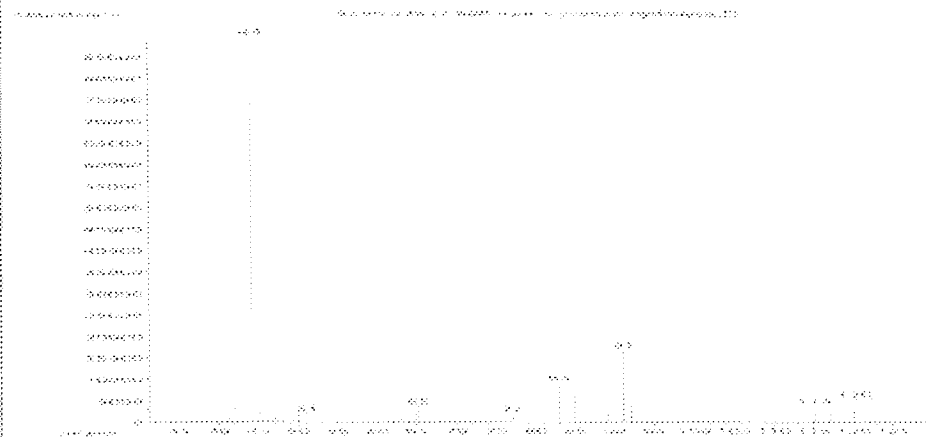


Fig. 6 Mass spectrum of amphetamine peak

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